A randomized controlled, trial on effects of mobile phone text messaging in combination with motivational interviewing versus standard infant feeding counselling on breastfeeding and child health outcomes, among women living with HIV

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Introduction: Breastfeeding improves child health, particularly in regions where diarrhoea, pneumonia and undernutrition are leading causes of death in children under five. Despite efforts to promote optimal breastfeeding practices, the practice of exclusive breastfeeding is low in South Africa. We assessed whether text messaging plus motivational interviewing prolonged exclusive breastfeeding during the first six months of life and improved child health outcomes.

Materials and methods: We conducted a randomized parallel group-controlled trial between July 2022 and May 2024, at a secondary-level healthcare facility. Mothers living with HIV, 18 years or older, initiating breastfeeding, on combination antiretroviral therapy (cART) and their infant were enrolled. The primary endpoint was exclusive breastfeeding from birth through week 24, based on the consecutive 24-hour food recall interviews.

Results: Using block randomization 276 mother-child pairs were randomly allocated to receive intervention (n=138) or standard infant feeding counselling (n=138), of whom 105 and 101 mother-child pairs in the intervention group and standard care group, respectively, completed all four study visits. Exclusive breastfeeding rate at 24 weeks in the intervention group was 6% (6/105) and 7% (7/101) in the standard care group, rate difference -1% (95% CI -6% to 4%). Most mothers continued breastfeeding while adding other foods through week 24. Sixty-two of 276 mothers completely stopped breastfeeding, of whom 25% (34/138) and 20% (28/138)) were in the intervention group and standard care group, respectively. The most common reasons for stopping breastfeeding were the mother needing to return to work or look for work, 66% (n=41). We also found that early breastfeeding cessation increased risk of child hospitalization or death compared to any form of breastfeeding, 10% (5/48) versus 3% (5/158), p=0.055.

Table 1 Estimate of breastfeeding rates

	Intervention group: n = 138		Standard care group: n=138			
	n	Number of endpoints (%)	n	Number of endpoints (%)	p-value	Rate difference (95% CI)
Co-primary outcomes						
Exclusive breastfeeding from childbirth to 24 weeks	105	6 (6%)	101	7 (7%)	0.72	-1(-6 to 4)
Any form from breastfeeding from childbirth to 24 weeks	105	79 (75%)	101	79 (78%)	0.61	-3 (-15 to 9)
Secondary outcomes						
Exclusive breastfeeding from childbirth to 6 weeks	105	47 (45%)	105	43 (41%)	0.58	4 (-10 to 17)
Any form of breastfeeding from childbirth to 6 weeks	105	98 (93%)	105	96 (91%)	0.60	2 (-5 to 9)
Exclusive breastfeeding from childbirth to 10 weeks	105	29 (28%)	102	24 (24%)	0.50	4 (-8 to 16)
Any form of breastfeeding from childbirth to 10 weeks	105	97 (92%)	102	91 (89%)	0.43	3 (-5 to 11)

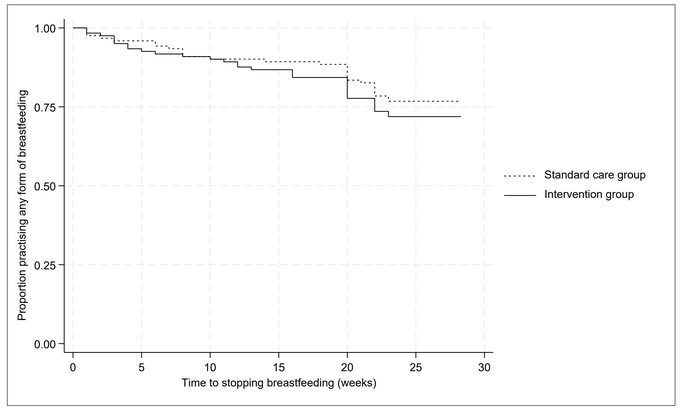

Figure 1 Time to stopping any form of breastfeeding, by study group

Conclusion: We found no effect of the intervention on exclusive breastfeeding rates. Early cessation of breastfeeding was prevalent and maternal employment characteristics are important social determinants of breastfeeding behaviour. There is need for further research evaluating the effect of interventions that include financial incentives on breastfeeding practices among socioeconomically disadvantaged mothers. HIV services should reliably offer cART, consistently monitor viral load, and support mothers cART adherence, in settings where mixed feeding is common.

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